ATTACHMENT A: *Response to Planning Commission April 20, 2016 Study Session Inquiries*

Questions & Comments	**Staff Response**
Surface water issues can be separated into two categories: water quality issues and water quantity issues.	This is a correct characterization. *Note:* in residential areas the concentrations of pollution is dilute. In these areas, addressing issues related to the volume of runoff generated usually also addresses the majority of water quality issues.
To what degree is the City taking LID actions at its own facilities and construction sites? Is the City taking actions to address pollution coming off of City streets?	• All *Western Washington Phase II Municipal Stormwater Permit (NPDES permit)* LID requirements apply to City sponsored projects and private projects. • The integration of LID into City operations includes staff from Natural Resources, Parks, Wellhead Protection, Transportation Planning, Street Operations, Maintenance and Operations, and Fire. Conversations among an interdepartmental and interdisciplinary team are occurring now, and will be on-going. This integration will be a learning process. • The City receives 30-40% of our drinking water from a shallow, vulnerable aquifer. The need to not infiltrate polluted stormwater runoff reduces the City's ability to use certain LID infiltration techniques in certain areas of Redmond. • It should be noted that LID techniques are not the sole stormwater treatment options available. The City has installed stormwater filters in some areas of the City in order to provide treatment before releasing stormwater runoff to streams and the Sammamish River.
Given Redmond's high water table, how do we use -pervious pavement and protect our aquifer from auto-related contaminates?	The Washington State Department of Ecology has not certified pervious pavement as a treatment for polluted stormwater runoff. Further, Department of Ecology's guidance also specifies that pervious pavement roads should only be used in areas with low traffic volumes due to the wear and tear considerations. Given these factors, the City will only allow the use of pervious pavement from pollution generating surfaces in locations where there is: sufficient distance to groundwater, and streets meet the low traffic criterion.
What land uses (zoning designations) do the NPDES LID integration requirement impact?	This requirement applies to all zoning designations. Some areas of the City are not subject to all NPDES LID-related requirements. However, due to overlap among the NPDES requirements--and other state-mandated stormwater requirements--LID activities will be required to some degree in all parts of Redmond.
If stormwater management actions were taken in Overlake in previous years, how would this effect our management decisions now?	It is difficult to answer this hypothetical question because stormwater management is complex and an analysis would require consideration of numerous variables. The characterization that current stormwater management practices attempt to address past and present management decisions is valid. That said: there is currently no retrofit requirement with the Phase II NPDES permit.

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Does site design in LID integration include building design?	• The proposed changes to the RZC do not directly address above ground building design. In some cases, a developer may choose to take design into consideration; designing to limit the footprint of a building to reduce runoff, or choosing to install a green roof. • To meet NPDES requirements, developers will need to ensure they make room for the placement of LID infiltration facilities on their sites. As part of the proposed changes, developers also will be required to ensure that subsurface structures, such as parking lots, do not impede infiltration into the ground. These considerations may indirectly influence building design.
How do the City's proposed guidelines compare to what is proposed for the other 87 Phase II NPDES jurisdictions?	Staff asked a land-use planning consultant, SvR, to rate the City's LID-integration process relative to other jurisdictions with which they work. Based on a scale from 1 (low) to 5 (high), the consultant felt that for staff engagement the City's process is a "5," and for adoption of LID practices and regulatory rigor, the Technical Committee's recommendations are about "3," --"on the high side of average." To further address this question, staff is scheduling a meeting with NPDES coordinators from neighboring jurisdictions.
How much will this cost developers? What is the nature of these costs?	This is difficult to answer because of the numerous variables involved. Pacific Northwest case studies on this topic are not plentiful. Some generalizations can be made: • There are cases in Western Washington where development projects have voluntarily chosen to use a LID approach because it was less expensive relative to traditional stormwater management techniques. • The cost of upfront on-site analysis and planning will increase. • In some cases, the added expense of analysis may be off-set by savings resulting from a reduction in the size of traditional detention facilities—i.e. smaller stormwater ponds and vaults. • In areas were soil infiltrates poorly, the use of LID within the overall stormwater management strategy will increase costs. • The State provides an "infeasibility criteria" for green stormwater infrastructure. If stormwater does not soak into the ground at a specified rate, the site is exempt from the NPDES on-site LID infiltration requirement. • In the Overlake Neighborhood, LID will allow reductions in the size of regional facilities. This will save on the order of tens of millions of dollars. --Without LID, City would need between 6 – 8 acres of land for regional detention facilities --With a "moderate level" of LID the City needs about 4 acres for regional detention facilities --Savings due to cost of land, construction --Additional saving in maintenance --Savings passed on to the development projects and Overlake stormwater utility rate payers